

TECHNICAL REVIEW AND EVALUATION
AIR QUALITY PERMIT NO. 43273
Arizona Flexible Packaging, Inc.

I. INTRODUCTION

This is a renewal Class II synthetic minor permit for existing Permit No. 1001335 issued to Arizona Flexible Packaging for a flexographic printing facility in Lake Havasu City, Arizona. This facility prints logos onto plastic film intended to be used as packaging.

A. Company Information

Facility Name: Arizona Flexible Packaging
Address: 1857 Commander Drive
Lake Havasu City, Mohave County, Arizona 86403

B. Attainment Classification

The Lake Havasu City area is attainment for all criteria pollutants.

C. Learning Sites Evaluation

There are nine schools within two miles of the facility. Based on dispersion modeling conducted in the previous permitting action, it has been determined that the ambient air quality at the learning sites will not be adversely impacted by the facility.

II. PROCESS DESCRIPTION

Operations at the facility can be categorized into two major groups; (A) printing and (B) laminating.

A. Printing

The printing operation begins with rolls of plastic film which are several feet long and weigh a few hundred pounds. These are loaded onto the printing press which uses a die mounted on a large roller to apply ink logos to the film. The die can be changed to produce different logos. The wet ink is then dried by hot air which is produced through the combustion of natural gas. The printing process produces Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAPs) due to the use of solvents and inks. The combustion of natural gas produces a small amount of Nitrogen Oxides (NO_x), Carbon Monoxide (CO), Sulfur Dioxide (SO₂), Particulate Matter (PM), and Particulate Matter with an aerodynamic diameter less than 10 microns (PM₁₀) emissions.

B. Laminating

Some of the logos need to be protected by another layer of plastic film. In this situation the laminator is employed. A roll of plastic film that has already had a logo applied is loaded into the laminator. It glues a second layer of clear plastic film onto the original layer. The glue is then dried by hot air produced by the combustion of natural gas. This combustion produces a small amount of VOC, NO_x, CO, SO₂, PM, and PM₁₀ emissions.

III. COMPLIANCE HISTORY

This facility has been inspected once and undergone four report/file reviews. There have been no violations and the facility is currently in-compliance.

IV. EMISSIONS

The facility has the potential to emit (PTE) VOC in excess of the major source threshold of 100 tons per year (tpy). The Permittee has agreed to a 90 tpy limit of VOC. Table-1 below provides the summary of emissions from various sources as well as facility wide PTE

Table 1: PTE of Facility

Pollutant	Printing Presses	Laminator	Total
	tpy	tpy	tpy
VOC	< 89.95	.05	< 90 (1),(3),(4)
SO₂	.006	.001	.007
NO_x	1.07	.17	1.24
CO	.89	.14	1.04
PM	.082	.013	.095
PM₁₀	.082	.013	.095
Individual HAPs	< 9	0	< 9 (1)
Total HAPS	< 22.5	0	< 22.5 (1)

Notes:

1. VOC and HAP emissions are based on emission caps contained in the permit.
2. All other emissions are based on AP-42 Section 1.4 emission factors.
3. VOC PTE was estimated as 36.3 tpy during the permitting process for Permit #1001335 in 2000. The increase of VOC PTE is due to the availability of historical data of ink and solvent usage as well as a change in the type of ink used. This data was not available in 2000.
4. The enforceable limit of 90 tpy of VOC emissions contained in this permit results in the facility's classification changing from minor to synthetic minor.

V. APPLICABLE REGULATIONS

Table 2 identifies applicable regulations and verification as to why that standard applies.

Table 2: Verification of Applicable Regulations

Unit	Control Device	Rule	Verification
Printing Press #1 & #2	N/A	A.A.C. R18-2-702.B-C	The printing presses are existing, stationary, point sources.
		A.A.C. R18-2-730.A,B,D,F and G	The printing presses are unclassified existing sources.
Laminator	N/A	A.A.C. R18-2-702.B-C	The laminator is an existing, stationary, point source.
		A.A.C. R18-2-730.A,B,D,F and G	The laminator is an unclassified existing source.
Fugitive dust sources	Water and other reasonable precautions	A.A.C. R18-2-604 A.A.C. R18-2-605 A.A.C. R18-2-606 A.A.C. R18-2-607 A.A.C. R18-2-614 A.A.C. R18-2-702	These are applicable to fugitive dust sources at the facility.

Mobile sources	Water Sprays/Water Truck for dust control	A.A.C. R18-2-801 A.A.C. R18-2-802 A.A.C. R18-2-804	These are applicable to off-road mobile sources, which either move while emitting air pollutants or are frequently moved during the course of their utilization.
Spray Painting	N/A	A.A.C. R-18-2-727	This standard is applicable to any spray painting operation.
Abrasive Blasting	Wet blasting, Dust collecting equipment or other approved methods	A.A.C. R-18-2-702 A.A.C. R-18-2-726	These standards are applicable to any abrasive blasting operation.
Demolition/renovation operations	N/A	A.A.C. R18-2-1101.A.8	This standard is applicable to any asbestos related demolition or renovation operations.

VI. PREVIOUS PERMIT CONDITIONS

Table 3 compares the conditions in Permit No. 1001335 with the conditions in this permit and cross-references the previous permit conditions to their location in the new permit

Table 3: Comparison of Previous and Current Permit Conditions

Condition # in permit nos. 1001335	Determination				Comments
	Delete	Kept	Revise	Streamline	
Attachment A			x		This Attachment has been revised and the most recent Attachment "A" is used for this permit.
Attachment B					
Condition I	x				This installation permit condition is not valid anymore since the facility was issued an operating permit previously and a renewal operating permit is being currently processed.
Condition II			x		The opacity standard has been changed from 40% to 20%.
Condition III A			x		The VOC limit has been lowered from 100 tpy to 90 tpy.
Condition III B	x				This requirement to notify the Department of solvent and ink changes is not necessary since there are enforceable VOC and HAP limits in the permit.
Condition IV			x		This condition has been changed from allowing natural gas or propane to allowing only natural gas.

Condition # in permit nos. 1001335	Determination				Comments
	Delete	Kept	Revise	Streamline	
Condition V A		x			This requirement to maintain monthly records of all VOC containing materials and associated Material Safety Data Sheets (MSDS) has been relocated to II F 2 a, b and c.
Condition V B	x				This requirement to maintain all records in electronic format or a logbook is already in Attachment A
Condition V C	x				This requirement to maintain all required records for a minimum of five years and have them available for inspection is already in Attachment A
Condition VI A		x			This requirement to not emit gaseous or odorous materials in such concentrations as to cause air pollution has been relocated to II F 1 b.
Condition VI B		x			This requirement to handle VOC containing materials in a manner which will not cause air pollution has been relocated to II F 1 c.

VII. MONITORING REQUIREMENTS

- A. Along with the semiannual compliance certification, the Permittee is required to submit reports of all recordkeeping, monitoring and maintenance required by the permit.
- B. The Permittee is required to maintain, on-site, records of the manufacturer's specifications or an Operation and Maintenance Plan for all equipment listed in the permit.
- C. The Permittee is required to conduct a quarterly EPA Reference Method 9 observation of emissions emanating from the printing presses and the laminator during operation. The Permittee is required to keep a record of the emission point being observed, name of the observer, date and time of observation, and the results of the observation. If the observation results in an exceedance of the opacity limit contained the permit, the Permittee is required to take corrective action, log all such actions, and report to ADEQ.
- D. The Permittee is required to maintain records of all purchase orders and invoices associated with the purchasing and procurement of all inks, solvents, adhesives and all other VOC containing materials used in the flexographic operation.
- E. The Permittee is required to maintain records of the MSDS for all inks, solvents and adhesives, as well as all other VOC containing materials consumed in the flexographic operation.
- F. The Permittee is required to maintain monthly records of the subtotals of the daily quantities of inks, solvents, adhesives, and all other VOC containing materials that are purchased each day along with their corresponding VOC content.
- G. The Permittee is required to calculate and record a monthly subtotal (in tons per month) and 12-month rolling total (in tons per year) of VOC emissions at the end of every month.
- H. The Permittee is required to keep a monthly record of the mass (in tons) of all HAP containing materials used; and the MSDS showing the mass fraction of HAP present.

- I. The Permittee is required to calculate and record a monthly subtotal (in tons per month) and 12-month rolling total (in tons per year) of HAP emissions at the end of every month.

VIII. LIST OF ABBREVIATIONS

A.A.C.....	Arizona Administrative Code
ADEQ.....	Arizona Department of Environmental Quality
CO	Carbon Monoxide
HAP	Hazardous Air Pollutant
MSDS	Material Safety Data Sheet
NO _x	Nitrogen Oxides
PM	Particulate Matter
PM ₁₀	Particulate Matter with an aerodynamic diameter less than 10 microns
PTE.....	Potential-to-Emit
SO ₂	Sulfur Dioxide
TPY	Tons per Year
VOC.....	Volatile Organic Compound